PART 70 SIGNIFICANT SOURCE MODIFICATION
OFFICE OF AIR QUALITY

Alcoa, Inc. - Warrick Operations
Jct. IN Hwys. 66 & 61
Newburgh, Indiana 47639

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 173-16034-00007	
Issued by: Signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: March 28, 2003

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SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary primary aluminum reduction source.

Responsible Official:	Melvin W. Lager, Jr.
Source Address:	Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629
Mailing Address:	Bldg. 860E, P.O. Box 10, Newburgh, Indiana 47629
General Source Phone Number:	812 - 853 - 6111
SIC Code:	3334
County Location:	Warrick County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

(a) One (1) flux gas injection identified as Pyrotek HD-2000 to be installed on melter 8M1 and two (2) flux gas injection systems identified as Pyrotek HD-2000 installed on melters 8M2, and 8M3 in the 8EMC casting complex exhausting to Stacks 134.80, 134.84, and 134.89 respectively with a capacity of 47.00 tons of molten aluminum, plant return scrap, purchased scrap, and alloy elements per hour each.

(b) Two (2) degassing units, identified as Alcan Compact Degassing (ACD) units to be installed in conjunction with #1 east holding furnace and #1 west holding furnace in the 1HDC complex. These units will be replacing one (1) A622 in-line degassing unit in the 1HDC and one (1) A622 in-line degassing unit in the 5HDC and will be exhausting to Stacks 134.63 and 134.66 respectively with a capacity of 10.0 tons of molten aluminum per hour each.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source modification does not include any insignificant activities as defined in 326 IAC 2-7-1(21).

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

(b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.3 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.4 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.

(b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.

(c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(d) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

(e) In the event that the Part 70 application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

(1) If the Part 70 draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Part 70 draft.

(2) If the Part 70 permit has gone through final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go through a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Part 70 permit at the time of issuance.

(3) If the Part 70 permit has gone through public notice, but has not gone through final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Part 70 permit, and the Title V permit will issued after EPA review.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) when operation begins, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3)

years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(e) To the extent, but only to the extent, Permittee is required by 40 CFR Part 60/63 to have an OM&M Plan, such plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 and the OM&M Plan requirements shall be the applicable requirements for maintenance.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application shall be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless alternative opacity limits are established in the D section of this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

Testing Requirements [326 IAC 2-7-6(1)]

C.7 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAM of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the source submits to IDEM, OAM, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.8 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

All monitoring and record keeping requirements specified by 40 CFR 63, Subpart RRR shall be implemented by March 24, 2003. Any other monitoring and record keeping requirements required by Section D shall be implemented when operation begins unless otherwise specified in Section D. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.11 Compliance Response Plan - Preparation, Implementation, Records, and Reports[326 IAC 2-7-

5] [326 IAC 2-7-6]

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition set forth in Section D of this permit. If a Permittee is required to have a Operation, Maintenance and Monitoring (0MM) Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction Plan under 40 CFR 60/63, such plans shall be deemed to satisfy the requirements for a CRP, for those compliance monitoring conditions. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan or Operation, Maintenance and Monitoring (OM&M) Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan or Operation, Maintenance and Monitoring (OM&M) Plan to include such response steps taken.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall constitute a violation of the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

(d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.

(e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

(f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.12 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

(5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015

Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.14 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

(a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.15 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) The reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) One (1) flux gas injection identified as Pyrotek HD-2000 to be installed on melter 8M1 and two (2) flux gas injection systems identified as Pyrotek HD-2000 installed on melters 8M2, and 8M3 in the 8EMC casting complex exhausting to Stacks 134.80, 134.84, and 134.89 respectively with a capacity of 47.00 tons of molten aluminum, plant return scrap, purchased scrap, and alloy elements per hour each.

(b) Two (2) degassing units, identified as Alcan Compact Degassing (ACD) units to be installed in conjunction with #1 east holding furnace and #1 west holding furnace in the 1HDC complex. These units will be replacing one (1) A622 in-line degassing unit in the 1HDC and one (1) A622 in-line degassing unit in the 5HDC and will be exhausting to Stacks 134.63 and 134.66 respectively with a capacity of 10.0 tons of molten aluminum per hour each.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] [40 CFR 52.21]

The following conditions shall apply:

(a) The annual feed/charge rate of each of melters 8M1, 8M2, and 8M3 shall not exceed 280,082 tons per year.

(b) The natural gas usage of each of melters 8M1, 8M2, and 8M3 shall not exceed 515 MMCF per year.

(c) PM emissions from melters 8M1, 8M2, and 8M3 shall not exceed 0.118 lb per ton of charge each and the total PM emissions from all the three melters shall not exceed 49.57 tons per year.

(d) PM10 emissions from melters 8M1, 8M2, and 8M3 shall not exceed 0.127 lb per ton of charge each and the total PM10 emissions from all the three melters shall not exceed 53.54 tons per year.

(e) NOx emissions from melters 8M1, 8M2, and 8M3 shall not exceed 91.19 lb per MMCF of natural gas each and the total NOx emissions from all the three melters shall not exceed 70.44 tons per year.

(f) The annual feed/charge rate of the 8EMC east holding furnace and the 8 EMC west holding furnace shall be limited to 823,440 tons per year.

(g) The natural gas usage of the 8EMC east holding furnace and the 8EMC west holding furnace shall not exceed 400 MMCF per year.

(h) The PM emissions from the 8EMC east holding furnace and the 8EMC west holding furnace shall be limited to 0.083 lb/ton of charge for chlorine input rates less than or equal to 0.51 lb/ton of aluminum. The PM emissions from the 8EMC east holding furnace and the 8EMC west holding furnace shall be limited to 0.165 lb/ton of charge for chlorine input rates greater than 0.51 lb/ton of aluminum but less than 0.71 lb/ton.

In no event shall chlorine exceed a maximum input rate of 0.71 lb/ton. In no event shall chlorine exceed a maximum input rate of 0.71 lb/ton. The total PM emissions from both holding furnaces shall be limited to 34.17 tons per year.

(i) The PM10 emissions from the 8EMC east holding furnace and the 8EMC west holding furnace shall be limited to 0.121 lb/ton of charge for chlorine input rates less than or equal to 0.51 lb/ton of aluminum. The PM10 emissions from the 8EMC east holding furnace and the 8EMC west holding furnace shall be limited to 0.241 lb/ton of charge for chlorine input rates greater than 0.51 lb/ton of aluminum but less than 0.71 lb/ton. In no event shall chlorine exceed a maximum input rate of 0.71 lbs/ton. The total PM emissions from both holding furnaces shall be limited to 49.89 tons per year.

(j) The NOx emissions from the 8EMC east holding furnace and the 8EMC west holding furnace shall be limited to 91.19 lb per MMCF of natural gas and the total NOx emissions from both holding furnaces shall be limited to 18.24 tons per year.

(k) The annual feed/charge rate of the 8EMC ACD and A622 units shall be limited to 411,720 tons per year each.

(l) The PM emissions from the 8EMC ACD unit shall be limited to 0.003 lb/ton of feed/charge and the total PM emissions shall be limited to 0.62 tons per year.

(m) The PM emissions from the 8EMC A622 unit shall be limited to 0.001 lb/ton of feed/charge and the total PM emissions shall be limited to 0.21 tons per year.

(n) The PM10 emissions from the 8EMC ACD and A622 units shall be limited to 0.00312 lb/ton of feed/charge and the total PM emissions shall be limited to 0.64 tons per year.

(o) The feed/charge rate of each of the #1 complex ACD units shall not exceed 86,000 tons per year.

(p) PM emissions from the #1 complex ACD units shall not exceed 0.10 lb per ton of molten metal and the total PM emissions the two (2) ACD units shall not exceed 8.60 tons per year.

(q) PM10 emissions from the #1 complex ACD units shall not exceed 0.209 lb per ton of charge each and the total PM10 emissions from both #1 complex ACD units shall not exceed 17.97 tons per year.

(r) The total feed/charge of the #1 complex east and the #1 complex west holding furnaces shall not exceed 172,000 tons per year.

(s) PM emissions from the #1 complex east and west holding furnaces shall not exceed 0.045 lb per ton of molten metal and the total PM emissions these furnaces shall not exceed 3.87 tons per year.

(t) PM10 emissions from the #1 complex east and west holding furnaces shall not exceed 0.066 lb per ton of charge and the total PM10 emissions from these furnaces shall not exceed 5.65 tons per year.

(u) NOx emissions from the #1 complex east and west holding furnaces shall not exceed 0.037 lb per ton of charge and the total NOx emissions from these furnaces shall not exceed 3.182 tons per year.

Compliance with these limits render the requirements of 326 IAC 2-2 and 40 CFR 52.21 (Prevention of Significant Deterioration) not applicable.

D.1.2 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to melters 8M1, 8M2, 8M3, and the two ACD units except when otherwise specified in 40 CFR Part 63, Subpart RRR.

D.1.3 Secondary Aluminum Smelting Limits [40 CFR Part 63.1500 (Subpart RRR)]

Pursuant to 40 CFR Part 63.1505, the following conditions shall apply to melters 8M1, 8M2, 8M3, and the two ACD units.

(a) The Permittee shall be in compliance with the following emission limitations and operating requirements upon startup:

(1) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of PM in excess of:

$$L_{cPM} = \frac{\sum_{i=1}^{n} \left(L_{tiPM} x T_{ti} \right)}{\sum_{i=1}^{\wedge} T_{ti}}$$

where L_{tiPM} = The PM emission limit for individual emission unit in the secondary aluminum processing unit I in paragraph (i)(1) and (2) of 40 CFR 63.1505.
T_{ti} = The feed/charge rate for individual emission unit I; and
L_{cPM} = The PM emission limit for secondary aluminum processing unit I.

The PM emission limit (L_{cPM}) for a Group 1 furnaces (Melters 8M1, 8M2, and 8M3) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

The PM emission limit (L_{cPM}) for the in-line degassers at a secondary aluminum production facility shall be 0.01 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(j)][40 CFR 63.1505(k)]

(2) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of HCl in excess of:

$$L_{cHCl} = \frac{\sum_{i=1}^{n} \left(L_{tiHcl} x T_{ti} \right)}{\sum_{i=1}^{\wedge} T_{ti}}$$

where L_{tiHCl} = The HCl emission limit for individual emission unit in the secondary aluminum processing unit I in paragraph (i)(4) of 40 CFR 63.1505.

T_{ti} = The feed/charge rate for individual emission unit I; and
L_{cHCl} = The HCl emission limit for secondary aluminum processing unit I.

The HCl emission limit (L_{cHCl}) for a Group 1 furnaces (Melters 8M1, 8M2, and 8M3) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

The HCl emission limit (L_{cHCl}) for the in-line degassers (ACD units in conjunction with #1 east holding furnace and #1 west holding furnace) at a secondary aluminum production facility shall be 0.04 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(j)][40 CFR 63.1505(k)]

(3) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of total tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans (D/F) in excess of:

$$L_{cDF} = \frac{\sum_{i=1}^{n} \left(L_{tiDF} x T_{ti} \right)}{\sum_{i=1}^{\wedge} T_{ti}}$$

where L_{tiDF} = The D/F emission limit for individual emission unit in the secondary aluminum processing unit; and
L_{cDF} = The D/F emission limit for secondary aluminum processing unit.

The D/F emission limit (L_{cDF}) for a Group 1 furnaces (Melters 8M1, 8M2, and 8M3) at a secondary aluminum production facility shall be 2.1×10^{-4} gr of D/F TEQ per ton of feed/charge or per ton of aluminum produced. Where TEQ is the toxicity equivalents for dioxins and furans as defined in “Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update”. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

(b) Identification, emission limits and means of compliance shall be posted on melters 8M1, 8M2, 8M3, and the two ACD units.

D.1.4 Labeling [40 CFR Part 63.1506(b)]

The owner or operator shall provide and maintain easily visible labels that shall be posted at the furnaces and the ACD units. Said labels shall identify the applicable emission limits and means of compliance, including:

(a) the type of affected source or emission unit (e.g., scrap dryer/delacquering kiln/decoating kiln, group 1 furnace, group 2 furnace, in-line fluxer); and

(b) the applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.

D.1.5 Operation, Maintenance, and Monitoring (OM&M) Plan [63.1510(b)]

The owner or operator must prepare and implement for each furnace, scrap shredder and scrap dryer and emission unit, a written operation, maintenance, and monitoring (OM&M) plan. The owner or operator must submit the plan to the applicable permitting authority for review and approval as part of the application for a part 70 or part 71 permit. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, the owner or operator must comply with the provisions of the submitted plan. Each plan must contain the following information:

(a) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.

(b) A monitoring schedule for each affected source and emission unit.

(c) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in §63.1505.

(d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:

(1) Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and

(2) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in subpart A of this part.

(e) Procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.

(f) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in 40 CFR 63.1510(b)(1), including:

(1) Procedures to determine and record the cause of an deviation or excursion, and the time the deviation or excursion began and ended; and

(2) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.

(g) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

D.1.6 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3-2 (Process Operations), the following conditions shall apply:

(a) The particulate matter (PM) from melters 8M1, 8M2, and 8M3 shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0 P^{0.11} - 40$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

(b) The particulate matter (PM) from the ACD units shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and P = process weight rate in tons per hour

D.1.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for these facilities. If the OM&M plan required by condition D.1.5 is developed in accordance with Section C - Preventive Maintenance Plans, then after the OM&M plan has been approved, it shall satisfy the requirements of this condition.

D.1.8 Alternative Opacity Limitation [326 IAC 5-1-5(b)]

Pursuant to 326 IAC 5-1-5(b):

(a) #1 Complex (HDC)
The alternate opacity limit (AOL) applies to the exhaust stacks from the East and West Holding furnaces. This AOL shall take the following form:

During fluxing, opacity may exceed the applicable opacity limit in 326 IAC 5-1-2 for no more than six (6) nonoverlapping six-minute average opacity readings not to exceed 80% opacity during fluxing only. During all other periods of the production cycle (not including the fluxing process), opacity shall not exceed the applicable limit pursuant to 326 IAC 5-1-2

(b) #8 Complex (EMC)
The alternate opacity limit (AOL) applies to the exhaust stacks from the East and West Holding furnaces. This AOL shall take the following form:

During fluxing, opacity may exceed the applicable opacity limit in 326 IAC 5-1-2 for no more than six (6) nonoverlapping six-minute average opacity readings; two (2) of these sets of six-minute averages shall not exceed 85% opacity and the remaining four (4) six-minute averages shall not exceed 80% opacity during fluxing only. During all other periods of the production cycle (not including the fluxing process), opacity shall not exceed the applicable limit pursuant to 326 IAC 5-1-2.

Compliance Determination Requirements

D.1.9 Testing Requirements [326 IAC 2-7-6(1),(6)] [40 CFR 63 Subpart RRR]

(a) In order to demonstrate compliance with 40 CFR Part 63 Subpart RRR, 40 CFR 52.21, and 326 IAC 2-2, the Permittee shall, within 180 days after startup, perform PM, HCl, and D/F testing on a representative 8EMC melter (8M1 or 8M3) and PM and HCL testing on a representative #1 complex holder (#1 east holding furnace and #1 west holding

furnace) ACD units, using methods as approved by the Commissioner, in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. The permittee shall conduct the tests while the affected emission units are operating at the highest production levels with charge materials representative of the range of materials processed by the units and at the highest reactive fluxing rates. Testing shall be conducted in accordance with Section C- Performance Testing. These tests shall be repeated every five (5) years. Recently conducted and approved D/F stack tests shall satisfy the D/F stack testing required by this condition.

(b) The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [63.1511(g)].

(c) To verify that the NOx emissions do not exceed PSD significant levels pursuant to 326 IAC 2-2 and 40 CFR 52.21, the permittee shall, within 180 days after startup, perform NOx testing on a representative 8EMC melter (8M1 or 8M3), 8EMC holder (east holding furnace or west holding furnace), and #1 complex holder (east holding furnace or west holding furnace.

D.1.10 Feed/Charge Determination [40 CFR 63.1506(d)]

Pursuant to 40 CFR 63.1506, the Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test. The Permittee shall operate each measurement system or other weight determination procedure in accordance with the Operation, Maintenance, and Monitoring Plan. Alternatively, the Permittee may choose to measure and record aluminum production weight from an affected emission unit rather than feed/charge weight provided that the aluminum production weight is measured for all emission units within a secondary aluminum processing unit and all calculations to demonstrate compliance with the emission limits for secondary aluminum processing units are based on aluminum production weight rather than feed/charge weight.

D.1.11 Secondary Aluminum Smelting Compliance Determination [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR Part 63.1510, the following conditions shall apply to melters 8M1, 8M2, 8M3, #1 east holding furnace ACD unit, and #1 west holding furnace ACD unit:

(a) Pursuant to 40 CFR 63.1510(j), for all furnaces at this source, the Permittee shall [40 CFR 63.1510(j)]:

(1) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or reactive liquid flux injected into each furnace and each ACD unit. The monitoring system must record the weight for each fifteen (15) minute period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test. The accuracy of the weight measurement device must be +/- 1% of the weight of the reactive component of the flux being measured. The Permittee may apply to IDEM, OAQ to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of within one (1) percent accuracy impracticable. The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months.

(2) Calculate and record the flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o).

(3) Record, for each fifteen (15) minute time period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of reactive flux.

(4) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test.

(b) An owner or operator of a secondary aluminum processing unit at a facility must include, within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the following information [40 CFR 63.1510(s)(1)]:

(1) The identification of each emission unit in the secondary aluminum processing unit;

(2) The specific control technology of pollution prevention measure to be used for each emission unit in the secondary aluminum processing unit and the date of its installation or application;

(3) The emission limit calculated for each secondary aluminum processing unit and performance test result with supporting calculations demonstrating initial compliance with each applicable emission limit;

(4) Information and data demonstrating compliance for each emission unit with all applicable design equipment work practice or operational standards of Subpart RRR; and

(5) The monitoring requirements applicable to each emission unit in a secondary aluminum processing unit and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR 63.1510(t).

(c) The SAPU compliance procedures within the OM&M plan may not contain any of the provisions provided in 40 CFR 63.1510(s)(2)(i) through (iv). [40 CFR 63.1510(s)(2)]

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.12 Labeling [40 CFR 63.1510(c)]

The owner or operator shall, for each furnace and ACD unit, inspect the labels required in Condition D.1.4 at least once per calendar month to confirm that the posted labels as required by the operational standard in 40 CFR 63.1506(b) are intact and legible.

D.1.13 Feed/Charge Determination [40 CFR 63.1510(e)]

The owner or operator of the furnaces must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from each furnace emission unit over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. The accuracy of the weight measurement device or procedure must be $\pm$1 percent of the weight being measured.

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.14 Record Keeping Requirements

(a) To document compliance with D.1.1, the Permittee shall maintain records of the feed/charge rate and the natural gas consumption of each of melters 8M1, 8M2, 8M3 for each 12 consecutive month period.

(b) To document compliance with D.1.1, the Permittee shall maintain records of the total feed/charge rate and the natural gas consumption of the 8 EMC east and west holding furnaces for each 12 consecutive month period.

(c) To document compliance with D.1.1, the Permittee shall maintain record of the feed/charge rate of the 8EMC ACD and A622 units for each 12 consecutive month period.

(d) To document compliance with D.1.1, the Permittee shall maintain record of the feed/charge rate of the #1 complex ACD units for each 12 consecutive month period.

(e) To document compliance with D.1.1, the Permittee shall maintain record of the feed/charge rate of the #1 complex east and the #1 complex west holding furnaces for each 12 consecutive month period.

(f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.15 Secondary Aluminum Production Record Keeping Requirements [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR Part 63.1517 the owner or operator shall:

(a) As required by 40 CFR 63.10(b), the owner or operator shall maintain files of all information (including all reports and notifications) required by the general provisions and Subpart RRR.

(b) The owner or operator must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

(c) The owner or operator may retain records on microfilm, computer disks, magnetic tape, or microfiche; and report required information on paper or on a labeled computer disk using commonly available and EPA -compatible computer software.

(d) In addition to the general records required by 40 CFR 63.1510(b), the owner or operator must maintain records of:

(1) For each group 1 furnace and each in-line fluxer at this source, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.

(2) For each furnace and each in-line fluxer, weights for each operating cycle or time period used in the performance test.

(3) Approved site-specific monitoring plan for a group 1 furnace without add-on air pollution control devices with records documenting conformance with the plan.

(4) Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.

(5) Records for any approved alternative monitoring or test procedure.

(6) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:

(i) Startup, shutdown, and malfunction plan;

(ii) For major sources, OM&M plan; and

(7) For each furnace, records of the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F emissions calculations.

(8) For each in-line degasser, records of the 3-day, 24-hour rolling average emissions of PM, and HCl emissions calculations.

D.1.16 Secondary Aluminum Production Reporting Requirements [40 CFR Part 63, Subpart RRR]

Pursuant to 40 CFR 63.1510 and 63.1516 the owner or operator shall:

(a) Submit initial notifications, upon startup, to the applicable permitting authority as described below.

(1) The owner or operator must provide notification of the anticipated date for conducting performance tests and visible emission observations. The owner or operator must notify the Administrator of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test must be provided at least 30 days before the observations are scheduled to take place.

(b) Each owner or operator must submit a notification of compliance status report within 60 days after the compliance dates specified in 40 CFR 63.1501. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the information specified in paragraphs (a)(1) through (10) of this section. The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination. In a State with an approved operating permit program where delegation of authority under section 112(l) of the CAA has not been requested or approved, the owner or operator must provide duplicate notification to the applicable Regional Administrator. If an owner or operator submits the information specified in this section at different times or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the information previously submitted. A complete notification of compliance status report must include:

(1) All information required in 40 CFR 63.9(h). The owner or operator must provide a complete performance test report for each affected source and emission unit for which a performance test is required. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests).

(2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system.

(3) Unit labeling as described in 40 CFR 63.1506(b), including process type or

furnace classification and operating requirements.

(4) The compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.

(5) Approved OM&M plan.

(6) Startup, shutdown, and malfunction plan, with revisions.

(c) The owner or operator must develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process. The owner or operator shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan must include:

(1) Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and

(2) Corrective actions to be taken in the event of a malfunction of a process, including procedures for recording the actions taken to correct the malfunction or minimize emissions.

(d) The owner or operator must submit semiannual reports within 60 days after the end of each 6-month period. Each report must contain the information specified in 40 CFR 63.10(c). When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period.

A report must be submitted if any of these conditions occur during a 6-month reporting period:

(1) An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter).

(2) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3).

(3) An affected source (including an emission unit in a secondary aluminum processing unit) was not operated according to the requirements of Subpart RRR.

(4) A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.

(e) The owner or operator must submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each

test method used for a particular type of emission point tested.

D.1.17 Reporting Requirements

(a) A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The quarterly report form on page 29 of this permit shall satisfy the reporting requirement in the above condition and condition D.1.7 in Minor Source Modification 173-15352-00007 to show compliance with the 411,720 tons of molten aluminum limit for the 8EMC ACD unit in both permits.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana
Source Modification No.: 173-16034-00007

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Affidavit (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana
Source Modification No.: 173-16034-00007
Facility: 8M1, 8M2, and 8M3
Parameter: Feed/Charge
Limit: 280,082 tons per twelve (12) consecutive month period rolled on a monthly basis each

YEAR: _____

Month	Column 1			Column 2			Column 1 + Column 2		
	This Month			Previous 11 Months			12 Month Total		
8M1	8M2	8M3	8M1	8M2		8M38M1		8M2	8M3
Month 1									
Month 2									
Month 3									

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana
Source Modification No.: 173-16034-00007
Facility: 8M1, 8M2, and 8M3
Parameter: Natural gas usage
Limit: 515 MMCF per twelve (12) consecutive month period rolled on a monthly basis each

YEAR: _____

Month	Column 1			Column 2			Column 1 + Column 2		
	This Month			Previous 11 Months			12 Month Total		
8M1	8M2	8M3	8M1	8M2		8M38M1		8M2	8M3
Month 1									
Month 2									
Month 3									

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana
Source Modification No.: 173-16034-00007
Facility: 8EMC east and 8EMC west holding furnaces
Parameter: Feed/Charge
Limit: 823,440 tons per twelve (12) consecutive month period rolled on a monthly basis

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana
Source Modification No.: 173-16034-00007
Facility: 8EMC east and 8EMC west holding furnaces
Parameter: Natural gas usage
Limit: 400 MMCF per twelve (12) consecutive month period rolled on a monthly basis

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana
Source Modification No.: 173-16034-00007
Facility: 8EMC ACD and A622
Parameter: Feed/Charge
Limit: 411,720 tons per twelve (12) consecutive month period rolled on a monthly basis each

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana
Source Modification No.: 173-16034-00007
Facility: #1 complex ACD
Parameter: Feed/Charge
Limit: 86,000tons per twelve (12) consecutive month period rolled on a monthly basis

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana
Source Modification No.: 173-16034-00007
Facility: #1 complex east and #1 complex west holding furnaces
Parameter: Feed/Charge
Limit: 172,000 tons per twelve (12) consecutive month period rolled on a monthly basis

YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	This Month	Previous 11 Months	12 Month Total
Month 1			
Month 2			
Month 3			

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Submitted by: _____
Title / Position: _____
Signature: _____
Date: _____
Phone: _____

Mail to: Permit Administration & Development Section
Office Of Air Quality
100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015

Alcoa, Inc. - Warrick Operations
Bldg. 860E, P.O. Box 10
Newburgh, Indiana 47629

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of _____ for _____.
(Title) (Company Name)

3. By virtue of my position with _____,I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____ .
(Company Name)

4. I hereby certify that Alcoa, Inc. - Warrick Operations, Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629, has constructed the three (3) flux gas injection systems identified as Pyrotek HD-2000 on melters 8M1, 8M2, and 8M3 in the 8EMC casting complex and the two (2) degassing units, identified as Alcan Compact Degassing (ACD) units in conjunction with #1 east holding furnace and #1 west holding furnace in the 1HDC complex in conformity with the requirements and intent of the construction permit application received by the Office of Air Management on September 05, 2002 and as permitted pursuant to **Source Modification No. 173–16034-00007** issued on _____

5. Additional (?operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit. (Delete this statement if it does not apply.)

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

_____
Signature

_____
Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana on this _____ day of _____, 20 _____ .

My Commission expires: _____

_____
Signature

_____
Name (typed or printed)

Indiana Department of Environmental Management
Office of Air Quality

Addendum to the Technical Support Document (TSD) for a Part 70 Significant Source Modification.

Source Background and Description

Source Name:	Alcoa, Inc. - Warrick Operations
Source Location:	Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629
County:	Warrick
SIC Code:	3334
Operation Permit No.:	T 173-6627-00007
Operation Permit Issuance Date:	Not Yet Issued
Significant Modification No.:	173-16034-00007
Permit Reviewer:	Ghassan Shalabi

On January 30, 2003, the Office of Air Quality (OAQ) had a notice published in the Boonville Standard, Booneville, Indiana, stating that Alcoa, Inc., had applied for a Part 70 Significant Source Modification relating to the construction of three (3) flux gas injection systems on melters 8M1, 8M2, and 8M3 and two (2) degassing units in conjunction with #1 east holding furnace and #1 west holding furnace in the 1HDC complex.

The public notice also stated that the IDEM, OAQ proposed to issue the Part 70 Significant Source Modification permit for this operation and provided information on how the public could review the proposed approval and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

(1) The OAQ made the following revisions to the permit to clarify that the mentioned units are all to be installed except for two of the flux gas injection systems that were installed and operated for a short period for experimental purposes. (Language deleted is shown with strikeout and that added is shown in bold):

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]
This stationary source is approved to construct and operate the following emission units and pollution control devices:

(a) **One (1) flux gas injection identified as Pyrotek HD-2000 to be installed on melter 8M1 and two (2) and two (2)** ~~Three (3)~~ flux gas injection systems identified as Pyrotek HD-2000 installed on melters ~~8M1,~~ 8M2, and 8M3 in the 8EMC casting complex exhausting to Stacks 134.80, 134.84, and 134.89 respectively with a capacity of 47.00 tons of molten aluminum, plant return scrap, purchased scrap, and alloy elements per hour each.

(b) Two (2) degassing units, identified as Alcan Compact Degassing (ACD) units **to be** installed in conjunction with #1 east holding furnace and #1 west holding furnace in the 1HDC complex. These units will be replacing one (1) A622 in-line degassing unit in the 1HDC and one (1) A622 in-line degassing unit in the 5HDC

and will be exhausting to Stacks 134.63 and 134.66 respectively with a capacity of 10.0 tons of molten aluminum per hour each.

Section D.1
Facility Description [326 IAC 2-7-5(15)]

(a) **One (1) flux gas injection identified as Pyrotek HD-2000 to be installed on melter 8M1 and two (2)** ~~Three (3)~~ flux gas injection systems identified as Pyrotek HD-2000 installed on melters ~~8M1,~~ 8M2 and 8M3 in the 8EMC casting complex exhausting to Stacks 134.80, 134.84, and 134.89 respectively with a capacity of 47.00 tons of molten aluminum, plant return scrap, purchased scrap, and alloy elements per hour each.

(b) Two (2) degassing units, identified as Alcan Compact Degassing (ACD) units **to be** installed in conjunction with #1 east holding furnace and #1 west holding furnace in the 1HDC complex. These units will be replacing one (1) A622 in-line degassing unit in the 1HDC and one (1) A622 in-line degassing unit in the 5HDC and will be exhausting to Stacks 134.63 and 134.66 respectively with a capacity of 10.0 tons of molten aluminum per hour each.

(2) Written comments were received from Mr. Sam H. Brunz, from Alcoa, Inc., on February 12, 2003. These comments and IDEM, OAQ responses, including changes to the permit (where language deleted is shown with strikeout and that added is shown in bold) are as follows:

(a) Comments in reference to the permit:

Comment 1:

<u>Amendment of Condition C.4</u> – The condition is acceptable for all emissions units in this permit, except for the #1 casting complex east and west holding furnaces and the 8EMC east and west holding furnaces. By letter dated October 1, 1999 (see Appendix A), alternate opacity limits were established for these holding furnaces.

It is thus requested that this condition be amended as follows:

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity from all emissions units in this permit except the #1 casting complex east and west holding furnaces and 8EMC east and west holding furnaces shall meet the following, unless otherwise stated in this permit:

Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period

Pursuant to 326 IAC 5-1-5(b):

<u>#1 Complex (HDC)</u>

The alternate opacity limit (AOL) applies to the exhaust stacks from the East and West Holding furnaces. This AOL shall take the following form:

During fluxing, opacity may exceed the applicable opacity limit in 326 IAC 5-1-2 for no more than

six (6) nonoverlapping six-minute average opacity readings not to exceed 80% opacity during fluxing only. During all other periods of the production cycle (not including the fluxing process), opacity shall not exceed the applicable limit pursuant to 326 IAC 5-1-2.

#8 Complex (EMC)

The alternate opacity limit (AOL) applies to the exhaust stacks from the East and West Holding furnaces. This AOL shall take the following form:

During fluxing, opacity may exceed the applicable opacity limit in 326 IAC 5-1-2 for no more than six (6) nonoverlapping six-minute average opacity readings; two (2) of these sets of six-minute averages shall not exceed 85% opacity and the remaining four (4) six-minute averages shall not exceed 80% opacity during fluxing only. During all other periods of the production cycle (not including the fluxing process), opacity shall not exceed the applicable limit pursuant to 326 IAC 5-1-2.

Response 1
Pursuant to Permit 173-10913-00007 a modification to Operations Permits OP 87-07-91-0115 through 0116, issued October 01, 1999, Condition C.4 is changed and a new D.1.8 was added as follows. All conditions following the new added condition were renumbered to reflect the addition of the new condition:

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless a**lternative opacity limits are established** ~~otherwise stated~~ in **the D section of** this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

D.1.8 Alternative Opacity Limitation [326 IAC 5-1-5(b)]
Pursuant to 326 IAC 5-1-5(b):

(a) #1 Complex (HDC)

The alternate opacity limit (AOL) applies to the exhaust stacks from the East and West Holding furnaces. This AOL shall take the following form:

During fluxing, opacity may exceed the applicable opacity limit in 326 IAC 5-1-2 for no more than six (6) non-overlapping six-minute average opacity readings not to exceed 80% opacity during fluxing only. During all other periods of the production cycle (not including the fluxing process), opacity shall not exceed the applicable limit pursuant to 326 IAC 5-1-2.

(b) #8 Complex (EMC)

The alternate opacity limit (AOL) applies to the exhaust stacks from the East and West Holding furnaces. This AOL shall take the following form:

During fluxing, opacity may exceed the applicable opacity limit in 326 IAC 5-1-2 for no more than six (6) non-overlapping six-minute average opacity readings; two (2) of these sets of six-minute averages shall not exceed 85% opacity and the remaining four (4) six-minute averages shall not exceed 80% opacity during fluxing only. During all other periods of the production cycle (not including the fluxing process), opacity shall not exceed the applicable limit pursuant to 326 IAC 5-1-2.

Comment 2

Amendment of Condition C.8 – There are some proposed monitoring and record keeping requirements in Section D that will not be totally on-line when operation begins. These monitoring and record keeping requirements are as follows:

(a.) Condition D.1.9 – Monitoring and recording the weight of feed/charge. Scales are in place. The operators are being trained on a wireless radio frequency system that will allow them to enter the weight of scrap without having to leave their trucks. Training is scheduled for the last 2 weeks of Feb, followed by "dry runs" to be sure that the system is working before March 24, 2003. It is expected that the permit will have been issued before March 24, 2003. During that interim period of time between permit issuance and March 24, 2003, many of the furnaces will be operating, but the monitoring and record keeping system will not be fully in place and operational until March 24, 2003.

(b.) Condition D.1.10(a) – Monitoring and recording the weight of gaseous or liquid reactive flux injected into each furnace. Chlorine mass flow meters have been installed at all projected chlorine usage points. However, the communication links between the meters and computer information recording system are still being installed. Once the chlorine monitoring system is fully operational, training of furnace and in-line degasser operators will be required.
This has been scheduled for the last 2 weeks of Feb, followed by "dry runs" to be sure that the system is working before March 24, 2003. It is expected that the permit will have been issued before March 24, 2003. During that interim period of time between permit issuance and March 24, 2003, many of the furnaces and in-line degassers will be operating, but the monitoring and record keeping system will not be fully in place and operational until March 24, 2003.

(c.) Condition D.1.13 (a) and (b) – Maintenance of natural gas consumption records for each of melters 8M1, 8M2, and 8M3; and the 8 EMC east and west holders on an individual basis. Presently, natural gas consumption is recorded for all 3 melters and both holders on a combined basis for all 5 furnaces, pursuant to Permit 87-07-91-0115, Attachment A, Condition 7 (See Appendix B).

Alcoa presently has implemented a priority on monitoring and record keeping systems required by 40 CFR 63, Subpart RRR. These systems must be implemented by March 24, 2003 for all Group 1 furnaces and in-line degassers in the plant, not just the units in this permit. Because these systems must be capable of recording and reporting on an individual charge basis, they are more complex than natural gas consumption recording and reporting on a monthly basis would be.

Alcoa does not object to recording and reporting natural gas consumption on a monthly basis, if it can modify its natural gas recording and reporting system from all 5 furnaces on a combined basis to each individual furnace within a time frame that allows it to develop and implement the conversion by the time it must conduct NOx performance testing, as required by Condition D.1.8(c). Without the NOx emission factors developed from the above referenced condition, natural gas consumption reporting by itself does not provide either IDEM or Alcoa with compliance assurance monitoring with respect to Condition D.1.1 (e).

To address the concerns it has raised by items a, b, and c above, Alcoa requests that the condition be amended as follows:

C.9 Compliance Monitoring

All monitoring and record keeping requirements specified by 40 CFR 63, Subpart RRR shall be implemented by March 24, 2003. Any other monitoring and record keeping requirements required by Section D shall be implemented when operation begins unless otherwise specified in Section D…(Alcoa has no objections to the rest of the proposed condition).

Concurrent with the above requested amendment, Alcoa requests that Conditions D.1.13 (a) and D.1.13(b) be amended as follows:

D.1.13 (a)

(a) To document compliance with D.1.1, the Permittee shall maintain records of the feed/charge rate of each of melters 8M1, 8M2, 8M3 for each 12 consecutive month period, commencing upon operation after the modifications authorized by this permit have been implemented. To document compliance with D.1.1, the Permittee shall maintain records of the natural gas consumption of each of melters 8M1, 8M2, 8M3 for each 12 consecutive month period, commencing upon the date when NOx emissions testing is performed pursuant to Condition D.1.8 (c). Until the NOx emissions testing is performed, natural gas consumption records shall be maintained as specified by Permit 87-07-91-0115, Attachment A, Condition 7.

D.1.13 (b)

(b) To document compliance with D.1.1, the Permittee shall maintain records of the feed/charge rate of the 8EMC east and west holding furnaces for each 12 consecutive month period, commencing upon issuance of this permit. To document compliance with D.1.1, the Permittee shall maintain records of the natural gas consumption of the 8EMC east and west holding furnaces for each 12 consecutive month period, commencing upon the date when NOx emissions testing is performed pursuant to Condition D.1.8 (c). Until the NOx emissions testing is performed, natural gas consumption records shall be maintained as specified by Permit 87-07-91-0115, Attachment A, Condition 7.

Response 2
This permit will not be issued before March 24, 2003. Therefore, comments regarding the monitoring and record keeping system not being fully in place and operational until March 24, 2003 will be disregarded.

The mentioned record keeping requirements are necessary to document that 326 IAC 2-2 and 40 CFR 52.21 (Prevention of Significant Deterioration) not applicable and required to be implemented when the units begin normal operation. Therefore, IDEM can not waive the record keeping requirement for any period of time.

The 40 CFR 63, subpart record keeping requirements are required to be implemented by March 24, 2003, a language will be added to condition C.9 to clarify the different implementation time for the different record keeping requirements. Therefore, Condition C.9 is changed as follows:

C.9 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]
All monitoring and record keeping requirements specified by 40 CFR 63, Subpart RRR shall be implemented by March 24, 2003. Any other monitoring and record keeping requirements required by Section D shall be implemented when operation begins unless otherwise specified in Section D ~~If required by Section D, all monitoring and record keeping requirements shall be implemented when operation begins~~. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

Comment 3

Amendment of Condition C.11 - Alcoa is required to develop and implement a written Start-up, Shutdown, and Malfunction (SSM) plan and Operating, Monitoring, and Maintenance (OMM) plan for all emission units in this permit, because they are subject to 40 CFR 63, Subpart RRR. The requirements of the SSM and OMM require all of the corrective actions listed by the suggested condition. It is thus unnecessary "make-work " for Alcoa to be required to develop the Compliance Response Plan (CRP), the SSM, and OMM, when the plans required by 40 CFR 63, Subpart RRR accomplish the same purpose as the CRP.

IDEM has held meetings recently with members of the CASE Coalition, wherein various conditions of the model Title V permit have been discussed. The CASE Coalition has proposed the following language regarding the preparation of Compliance Response Plans:

"The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition set forth in Section D of this permit, except that no CRP is required for any compliance monitoring condition subject to the Start-up, Shut Down, Malfunction Plan ("SSM") Requirements of 40 CFR Part 60 or Part 63 ("CRP Requirement").

IDEM has indicated a favorable response to the proposed language in the Model Title V permit meetings. The most recent meeting was held with Nisha Sizemore and Roger Letterman on Jan. 16, 2003.

Alcoa thus requests that Condition C.11(a) be amended by revising the first sentence of the condition as follows (suggested change in bold print):

The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition set forth in Section D of this permit, **except that no CRP is required for any compliance monitoring condition subject to the Start-up, Shut Down, Malfunction Plan ("SSM") Requirements of 40 CFR Part 60 or Part 63 ("CRP Requirement").**

Response 3

IDEM does not agree that the SSM plan alone will satisfy all the corrective actions suggested by condition C.11 but the OM&M or the PMP and the SSM will. Therefore, Condition C.11 is changed as follows:

C.11 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition **set forth in Section D** of this permit. **If a Permittee is required to have a Operation, Maintenance and Monitoring (0MM) Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction Plan under 40 CFR 60/63, such plans shall be deemed to satisfy the requirements for a CRP, for those compliance monitoring conditions.** A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:

(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected time frame for taking reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan **or Operation, Maintenance and Monitoring (OM&M) Plan** and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan **or Operation, Maintenance and Monitoring (OM&M) Plan** to include such response steps taken.

The OMM Plan or Parametric Monitoring Plan and SSM Plan shall be submitted within the time frames specified by the applicable 40 CFR 60/63 requirement.

Comment 4

Amendment of Conditions D.1.1 (h) and (i) – On Jan. 21-22, 2003, Alcoa had the 8EMC west holding furnace exhaust stack re-tested, because the chlorine input rate used for the September, 2002 MACT compliance tests was not representative of the maximum desired chlorine input. Based on preliminary results, Alcoa cannot comply with the 0.083 lbs. PM / ton of aluminum and 0.121 lbs. PM_{10} / ton of aluminum emissions limits on this permit when fluxing at a chlorine input rate of 0.71 lbs. Cl_2. / ton of aluminum input. It is thus requested that these conditions be amended as follows:

(h) The PM emissions from the 8EMC east holding furnace and the 8EMC west holding furnace shall be limited to 0.083 lb. / ton of charge for chlorine input rates less than or equal to 0.51 lbs. per ton of aluminum. The PM emissions from the 8EMC east holding furnace and the 8EMC west holding furnace shall be limited to 0.165 lb. / ton of charge for chlorine input rates greater than 0.51 lbs. per ton of aluminum but less than 0.71 lbs. / ton. In no event shall chlorine exceed a maximum input rate of 0.71 lbs./ton. Total PM emissions from both holding furnaces shall be limited to 34.17 tons/yr.

(i) The PM_{10} emissions from the 8EMC east holding furnace and the 8EMC west holding furnace shall be limited to 0.121 lb. / ton of charge for chlorine input rates less than or equal to 0.51 lbs. per ton of aluminum. The PM_{10} emissions from the 8EMC east holding furnace and the 8EMC west holding furnace shall be limited to 0.241 lb. / ton of charge for chlorine input rates greater than 0.51 lbs. per ton of aluminum but less than 0.71 lbs. / ton. In no event shall chlorine exceed a maximum input rate of 0.71 lbs. / ton. Total PM_{10} emissions from both holding furnaces shall be limited to 49.89 tons/yr.

Response 4

To reflect the correct PM and PM10 stack testing results at different chlorine input rates, condition D.1.1 is changed as follows:

(h) The PM emissions from the 8EMC east holding furnace and the 8EMC west holding furnace shall be limited to 0.083 lb/ton of charge **for chlorine input rates less than or equal to 0.51 lb/ton of aluminum. The PM emissions from the 8EMC east holding furnace and the 8EMC west holding furnace shall be limited to 0.165 lb/ton of charge for chlorine input rates greater than 0.51 lb/ton of aluminum but less than 0.71 lb/ton. In no event shall chlorine exceed a maximum input rate of 0.71 lb/ton.** ~~And the~~ **The** total PM emissions from both holding furnaces shall be limited to 34.17 tons per year.

(i) The PM10 emissions from the 8EMC east holding furnace and the 8EMC west holding furnace shall be limited to 0.121 lb/ton of charge **for chlorine input rates less than or equal to 0.51 lb/ton of aluminum. The PM10 emissions from the 8EMC east holding furnace and the 8EMC west holding furnace shall be limited to 0.241 lb/ton of charge for chlorine input rates greater than 0.51 lb/ton of aluminum but less than 0.71 lb/ton. In no event shall chlorine exceed a maximum input rate of 0.71 lbs/ton.** ~~and the~~ **The** total PM emissions from both holding furnaces shall be limited to 49.89 tons

per year.

Comment 5

Amendment of Condition D.1.1 (q) - The proposed condition limits PM_{10} emissions from the ACD units to 0.209 lb./ ton of charge, each, then refers to 3 melters with an annual PM_{10} emissions limit of 17.97 tons/yr. Alcoa suspects that this condition was intended to limit annual PM_{10} emissions of the 2 ACD units to 17.97 tons/yr. It thus requests that the condition be amended as follows:

(q) PM_{10} emissions from the #1 complex ACD units shall not exceed 0.209 lb per ton of charge each and the total PM_{10} emissions from both #1 complex ACD units shall not exceed 17.97 tons/yr.

Response 5

To correct a typographical error, condition D.1.1(q) is changed as follows:

D.1.1 Prevention of Significant Deterioration (PSD) [326 IAC 2-2] [40 CFR 52.21]

(q) PM10 emissions from the #1 complex ACD units shall not exceed 0.209 lb per ton of charge each and the total PM10 emissions from ~~all the three melters~~ **both #1 complex ACD units** shall not exceed 17.97 tons per year.

Comment 6

Amendment of Proposed Condition D.1.5 (d) (1) – Alcoa notes that the wording of this proposed condition conflicts with proposed Condition D.1.10 (a) (1). Condition D.1.5 (d) (1) requires that the OMM plan include procedures for proper operation and maintenance of monitoring systems used to determine compliance, including (1) Calibration and certification of accuracy at least every 6 months, according to the manufacturer's instructions.

The last sentence of condition D.1.10(a)(1) requires that the permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months.

The wording of the referenced last sentence of condition D.1.10 (a)(1) rightfully acknowledges that the manufacturer is best suited to specify a calibration schedule for the monitoring device he has supplied, but specifies a calibration schedule of every six (6) months if the manufacturer of the device does not specify a schedule.

To maintain consistency between the two referenced conditions, Alcoa requests that proposed condition D.1.5 (d)(1) be amended as follows:

(d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:

(1) Calibration and certification of accuracy of each monitoring device in accordance with the schedule and instructions specified by the manufacturer, or if no calibration schedule is specified by the manufacturer, at least once every 6 months; and… (Alcoa has no objections to the rest of the proposed condition)

Response 6

IDEM does not agree with the argument of the commentator regarding his request to change the language of condition D.1.5 (d)(1). Condition D.1.5 (d)(1) and condition D.1.10 (a)(1) (now D.1.11 (a)(1)) were included in this permit pursuant to two different rules where and each one of these rules has it's specific requirements. Condition D.1.5 (d)(1) was included in the permit pursuant to 63.1510 (b) and condition D.1.11 (a)(1) was included in the permit pursuant to 63.1510 (j). IDEM has no authority to change the requirements of any federal rule. Therefore, no change is made to the permit conditions as a result of this comment.

Comment 7
Deletion of Proposed Condition D.1.7 - IDEM has held meetings recently with members of the CASE Coalition, wherein various conditions of the model Title V permit have been discussed. The CASE Coalition has proposed the following language regarding the preparation of Preventive Maintenance Plans:

"To the extent Permittee is required by 40 CFR Part 60/63 to have an OMM Plan, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 and, otherwise, the OMM Plan requirements shall be the applicable requirements for maintenance. "

IDEM has indicated a favorable response to the proposed language in the Model Title V permit meetings. The most recent meeting was held with Nisha Sizemore and Roger Letterman on Jan. 16, 2003. The proposed condition is close to the intent of the CASE Coalition proposed language. Of concern, however, is the requirement to prepare the OMM plan in accordance with proposed Condition C.2 (although the proposed condition refers to Section B, which does not contain the PMP requirements). The OMM plan requirements of 40 CFR 63, Subpart RRR are more stringent than Condition C.2. Thus, the OMM would be prepared in violation of 40 CFR 63, Subpart RRR if it were prepared in accordance with proposed Condition C.2.

Alcoa thus proposes that this condition be deleted from the permit, since the OMM plan will meet the requirements of proposed condition C.2 when prepared in accordance with proposed condition D.1.6, or that IDEM amend Condition C. 2 to include the above CASE coalition language.

Response 7
IDEM's understanding that the commentator was referring to condition D.1.5 when he referred to condition D.1.6 in the last paragraph of this comment.

IDEM agrees that the OM&M plan requirements will satisfy the PMP requirements. Therefore, condition C.2 is changed by adding the following:

(e) To the extent, but only to the extent, Permittee is required by 40 CFR Part 60/63 to have an OM&M Plan, such plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 and the OM&M Plan requirements shall be the applicable requirements for maintenance.

To correct typographical errors, condition D.1.7 is changed as follows:

D.1.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]
A Preventive Maintenance Plan, in accordance with Section ~~B~~ **C** - Preventive Maintenance Plan, of this permit, is required for these facilities. If the OM&M plan required by condition ~~D.1.6~~ **D.1.5** is developed in accordance with Section ~~B~~ **C** - Preventive Maintenance Plans, then after the OM&M plan has been approved, it shall satisfy the requirements of this condition.

Comment 8
Amendment of Condition D.1.8 (a) – Alcoa requests that this condition be amended in two places.

Representative Emissions Unit Testing

40 CFR 63.1511(f) allows a representative emissions unit to be tested if it uses identical feed / charge and flux materials in the same proportions as the emissions units it represents, if it is subject to the same work practices and is of the same design as the emissions units it represents, and is tested under the highest load or capacity reasonably expected to occur for any of the emissions units it represents. The condition, as proposed, would require that all 8EMC melters be tested, and both #1 Complex ACD degassers be tested.

D/F Testing

Compliance tests were performed in Sept., 2002 for D/F on the 8EMC Melter #2. The maximum emitting operating parameter established for these tests was that purchased alternative oily scrap, at 1.5% maximum oil content by weight, would not exceed 12,480 lbs./charge. Results of the D/F tests under this operating parameter were 9.95×10^{-7} grains D/F TEQ per ton of feed charge, compared to the allowable emission rate of 2.1×10^{-4} grains D/F TEQ per ton of feed charge furnace. Modification of the melters by adding the HD-2000 flux gas injection system is not expected to impact D/F emissions. Given the wide margin of compliance demonstrated by these tests and the expense of performing D/F tests, Alcoa questions the need to repeat the D/F tests when the modified 8EMC melters commence operation.

Alcoa thus requests that proposed condition D.1.8 (a) be amended as follows:

(a) In order to demonstrate compliance with 40 CFR 63 Subpart RRR, 40 CFR 52.21, and 326 IAC 2-2, the permittee shall, within 180 days after startup, perform PM and HCl testing on a representative 8M1, 8M2, or 8M3 melter and PM and HCl testing on a representative #1 east holding furnace or #1 west holding furnace ACD unit…(Alcoa has no objections to the rest of the proposed condition)

Response 8
In a previous discussion with the source, Mr. Bruntz indicated that the three melters fire in the same manner but do not have the same burner configuration. Melters 8M1 and 8M3 have 4 burners, each rated at 20 mm Btu/hr. Melter 8M2 has 3 burners each rated at 20 MMBtu/hr each. In other words, melters 8M1 and 8M3 are the same but 8M2 is different. IDEM agrees with the source that the D/F stack test conducted in September 2003 should satisfy the D/F testing requirement of the this condition. Therefore, condition D.1.8(a) (now condition D.1.9(a)) is changed as follows:

D.1.9 Testing Requirements [326 IAC 2-7-6(1),(6)] [40 CFR 63 Subpart RRR]

(a) In order to demonstrate compliance with 40 CFR Part 63 Subpart RRR, 40 CFR 52.21, and 326 IAC 2-2, the Permittee shall, within 180 days after startup, perform PM, HCl, and D/F testing on **a representative 8EMC melter (8M1 or 8M3)** ~~melters 8M1, 8M2, and 8M3~~, and PM and HCL testing on **a** ~~the~~ **representative** #1 **complex holder (**east holding furnace and #1 west holding furnace**)** ~~ACD units~~, using methods as approved by the Commissioner, in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. The permittee shall conduct the tests while the affected emission units are operating at the highest production levels with charge materials representative of the range of materials processed by the units and at the highest reactive fluxing rates. Testing shall be conducted in accordance with Section C-Performance Testing. These tests shall be repeated every five (5) years. **Recently conducted and approved D/F stack test shall satisfy the D/F stack testing required by this condition.**

Comment 9
Amendment of Condition D.1.10 (a) (1) – In order to be consistent with 40 CFR 63.1510(j) (1)(ii), Alcoa requests that the third sentence of the proposed condition be amended as follows:
The accuracy of the weight measurement device must be + / - 1% of the weight of the reactive component of the flux being measured.

Response 9
IDEM agrees that this change in condition D.1.10 (now condition D.1.11) will make it consistent with 40 CFR 63.150(j)(1)(ii). Therefore, condition D.1.11 (a)(1) is changed as follows:

D.1.11 Secondary Aluminum Smelting Compliance Determination [40 CFR Part 63, Subpart

RRR]
Pursuant to 40 CFR Part 63.1510, the following conditions shall apply to melters 8M1, 8M2, 8M3, #1 east holding furnace ACD unit, and #1 west holding furnace ACD unit:

(a) Pursuant to 40 CFR 63.1510(j), for all furnaces at this source, the Permittee shall [40 CFR 63.1510(j)]:

(1) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or reactive liquid flux injected into each furnace and each ACD unit. The monitoring system must record the weight for each fifteen (15) minute period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test. The accuracy of the weight measurement **device must be +/- 1%** ~~shall be within one (1) percent~~ of the weight of the reactive component of the flux being measured. The Permittee may apply to IDEM, OAQ to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of within one (1) percent accuracy impracticable. The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months.

Comment 10
Deletion of Condition D.1.14 (b) – The proposed condition conflicts with proposed condition C.14. Since Condition C.14 is more stringent than the proposed condition, it is requested that proposed condition D.1.14 (b) be deleted from the permit.

Response 10
IDEM doesn't agree with the commentator's argument. Condition C.14 is pursuant to 326 IAC 2-7 where as Condition D.1.14 (b) (now Condition D.1.15 (b)) is pursuant to 40 CFR 63, Subpart RRR. IDEM agrees with the commentator that condition C.14 is more stringent than condition D.1.15 (b) but doesn't agree with the request to delete condition D.1.15 (b) because both rules apply to the source. The source needs to comply with the more stringent condition in order to comply with both requirements. Therefore, no change is made to the permit conditions as a result of this comment.

The source may request IDEM to review this issue during the Part 70 permit review pursuant to 326 IAC 2-7-24 [Part 70 permits: establishment of streamlined requirements for units subject to multiple requirements].

Comment 11
Amendment of Condition D.1.14 (d) (5) (iii) – 40 CFR 63, Subpart RRR does not require that a site-specific secondary aluminum processing unit emission plan be prepared. 40 CFR 63.1510 (s) (1)(iii) does require that the OMM plan must include an emission limit calculated for the secondary aluminum processing unit and performance test results with supporting calculations demonstrating initial compliance with each applicable limit. If this is the intent of the proposed condition, the condition can be deleted, because the requirements are addressed by Condition D.1.14 (d)(5)(ii). Alcoa requests that IDEM either clarify what is required by a site-specific secondary aluminum processing unit emission plan or delete the proposed condition.

Response 11
Condition D.1.15 (d) was changed by adding a new requirement as condition D.1.15 (d) (3) to reflect the requirements of 40 CFR 63.1517 accurately. All conditions following the new added condition were renumbered to reflect the addition of the new condition:

D.1.15 Secondary Aluminum Production Record Keeping Requirements [40 CFR Part 63, Subpart RRR]

(d) In addition to the general records required by 40 CFR 63.1510(b), the owner or operator must maintain records of:

(1) For each group 1 furnace and each in-line fluxer at this source, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.

(2) For each furnace and each in-line fluxer, weights for each operating cycle or time period used in the performance test.

(3) **Approved site-specific monitoring plan for a group 1 furnace without add-on air pollution control devices with records documenting conformance with the plan.**

Condition D.1.15 (d) was also changed as follows:

~~(5)~~ **(6)** Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:

(i) Startup, shutdown, and malfunction plan;

(ii) For major sources, OM&M plan; and

~~(iii) Site-specific secondary aluminum processing unit emission plan.~~

Comment 12
Amendment of Condition D.1.16 – This proposed condition requires that quarterly reports be filed within thirty days after the end of the quarter being reported. Condition D.1.15 (d) requires that a semi-annual report be filed within 60 days after the end of the semi-annual period being reported. Both the quarterly report and semi-annual report require certification as defined by 326 IAC 2-7-1(34). In the interest of report consolidation, Alcoa requests that it be allowed to combine the 2nd and 4th quarter reports with the semi-annual reports. Alcoa notes that IDEM has, in the past, allowed such report combinations where a Secondary Aluminum MACT applicable emission unit was permitted (See Appendix C).

Alcoa thus requests that the proposed condition be amended by inserting the following sentence prior to the last sentence of the proposed condition:
The Permittee may combine the second (2nd) and fourth (4th) quarter reports with the semi-annual reports specified by Condition D.1.15 (d) and submit them by the reporting deadlines applicable for the semi-annual reports.

Response 12
IDEM does not agree with the commentator's argument regarding the report consolidation. The quarterly report in condition D.1.16 (now Condition D.1.17) is required to document compliance with the limits given in condition D.1.1. The source is required to comply with the limits stated in condition D.1.1 in order to render the requirements of 326 IAC 2-2 and 40 CFR 52.21 (Preventative of Significant Deterioration) not applicable. On the other hand, Condition D.1.15 (now Condition D.1.16) is pursuant to 40 CFR Part 63, Subpart RRR. For few years, IDEM has been following a policy of requiring quarterly reporting to be submitted within thirty days. Therefore, no change is made to the permit conditions as a result of this comment.

Comment 13
Amendment of Quarterly Report Forms Referenced by Condition D.1.16 – Alcoa has reviewed the

proposed quarterly report forms, and requests the following correction:

(A.) Facility: 8EMC ACD and A622 – Minor Source Modification 173-15352-00007 includes a quarterly report form requiring that molten metal input to the 8EMC east holding furnace ACD be reported on a monthly basis (See Appendix D). To date, Alcoa has filed 2 such reports for this emission unit. The proposed quarterly report form duplicates the reporting requirement for the 8EMC east holding furnace ACD, because molten metal is identical to feed/charge for an in-line degas unit. Alcoa thus requests that IDEM either amend Minor Source Modification 173-15352-00007 by deleting Condition D.1.7, or amend the quarterly report form, as suggested in Appendix E.

Response 13
Condition D.1.17 is changed as follows:

D.1.17 Reporting Requirements

(a) A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The quarterly report form on page 29 of this permit shall satisfy the reporting requirement in the above condition and condition D.1.7 in Minor Source Modification 173-15352-00007 to show compliance with the 411,720 tons of molten aluminum limit for the 8EMC ACD unit in both permits.

(b) The following comments are in reference to the Technical Support Document (TSD). IDEM, OAQ, prefers that the Technical Support Document (TSD) reflect the permit that was on public notice. Changes to the permit or technical support material that occur after the public notice are documented in this Addendum to the Technical Support Document. This accomplishes the desired result of ensuring that these types of concerns are documented and part of the record regarding this permit decision.

Page 3, Potential to Emit of Modification - 326 IAC 1-2-42 defines modification (a) as a physical change or change in the method of operation that increases the potential to emit any regulated pollutant that could be emitted from the emissions unit, or that results in emissions of any regulated pollutant not previously emitted; (b) construction of one (1) or more new emissions units that have the potential to emit regulated air pollutants; or (c) reconstruction of one (1) or more existing emissions units that increases the potential to emit any regulated pollutant.

For this modification, the (a) portion of the modification definition is applicable. The table provided in this section of the TSD reflects the potential to emit of the modified sources after they have been modified, but it does not reflect the change in the potential to emit resulting from the modification.

The title of this section should thus be re-worded as follows:

Emission Units Potential to Emit after Implementation of the Permitted Modifications.

Response to comment:

This TSD addendum acknowledges the following change, however the TSD is not changed, as

follows:

Potential to Emit after ~~of~~ Modification ~~After Issuance~~

Page 3, Justification for Modification - Alcoa disagrees with IDEM that this modification is significant for PM and PM_{10}. In order for a modification to be significant for PM and PM_{10}, pursuant to 326 IAC 2-7-10.5(f)(4), the change in the potential to emit has to exceed 25.0 tons/yr. The modification is the change that causes an increase in potential emissions. The change in potential emissions is 0.64 ton/yr. for PM and 3.32 tons/yr. for PM_{10}.

Alcoa also disagrees with IDEM that this modification has an HF potential to emit of 11.5 tons/yr. After the emission units sources are modified, the revised potential to emit will be 11.5 tons/yr., but the modification will only result in a change in potential emissions of 2.68 tons/yr.

Finally, Alcoa disagrees with IDEM that pursuant to 326 IAC 2-7-10.5(f)(6), the modification is significant. The increase in HAP's potential emissions on a combined basis is 15.5 tons/yr. IDEM is incorrectly using the potential emissions that will result after the modification to state that 326 IAC 2-7-10.5(f)(6) is applicable.

The increase in HCl potential emissions will be 14.24 tons/yr. Solely for that reason, the modification is to 326 IAC 2-7-10.5(f)(6).

Response to comment:

This TSD addendum acknowledges the following change, however the TSD is not changed, as follows:

Justification for Modification
The Part 70 Operating permit (Not yet issued) is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to ~~326 IAC 2-7-10.5 (f)(4) and~~ 326 IAC 2-7-10.5 (f)(6). ~~The potential to emit is greater than or equal to twenty-five (25) tons per year for PM, PM-10 and NOx. Also, the~~ **The** potential to emit is greater than 10 tons per year for a single HAP**.** ~~and greater than 25 tons per year for the total HAPs.~~

Page 13, Discussion Regarding 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)
Alcoa does not understand the statement in this discussion that states

"However, furnace #4 is subject to the provisions of 40 CFR 63 Subpart RRR. Therefore, compliance with 40 CFR 63, subpart RRR satisfies the requirements of 326 IAC 2-4.1"

There is no furnace #4 in this permit. However, all emission units in this permit are subject to 40 CFR 63, Subpart RRR, and will thus comply with 326 IAC 2-4.1.

Response to comment:

This TSD addendum acknowledges the following change, however the TSD is not changed, as follows:

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)
Melters 8M1, 8M2, and 8M3 have the potential to emit levels of hazardous air pollutants (HAPs) greater than those that constitute major source applicability according to Section 112 of the 1990 Clean Air Act. However, ~~furnace #4 is~~ **melters 8M1, 8M2, and 8M3 are** subject to the provisions

of 40 CFR 63 Subpart RRR (National Emission Standards for Hazardous Air Pollutants, for Secondary Aluminum Production). Therefore, compliance with 40 CFR Part 63 Subpart RRR satisfies the requirements of 326 IAC 2-4.1.

Page 13, Discussion Regarding 326 IAC 5-1-2 (Opacity Limitations) – Alcoa disagrees with the applicability of the cited regulation with respect to the 8EMC east and west holders, and the #1 Complex east and west holders. See Appendix A.

Response to comment:

This TSD addendum acknowledges the following change, however the TSD is not changed, as follows:

Opacity [326 IAC 5-1]
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless a**lternative opacity limits are established** ~~otherwise stated~~ in **the D section of** this permit:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

Alternative Opacity Limitation [326 IAC 5-1-5(b)]
Pursuant to 326 IAC 5-1-5(b):

(a) **#1 Complex (HDC)**

The alternate opacity limit (AOL) applies to the exhaust stacks from the East and West Holding furnaces. This AOL shall take the following form:

During fluxing, opacity may exceed the applicable opacity limit in 326 IAC 5-1-2 for no more than six (6) non-overlapping six-minute average opacity readings not to exceed 80% opacity during fluxing only. During all other periods of the production cycle (not including the fluxing process), opacity shall not exceed the applicable limit pursuant to 326 IAC 5-1-2.

(b) **#8 Complex (EMC)**

The alternate opacity limit (AOL) applies to the exhaust stacks from the East and West Holding furnaces. This AOL shall take the following form:

During fluxing, opacity may exceed the applicable opacity limit in 326 IAC 5-1-2 for no more than six (6) non-overlapping six-minute average opacity readings; two (2) of these sets of six-minute averages shall not exceed 85% opacity and the remaining four (4) six-minute averages shall not exceed 80% opacity during fluxing only. During all other periods of the production cycle (not including the fluxing process), opacity shall not exceed the applicable limit pursuant to 326 IAC 5-1-2.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source Modification.

Source Background and Description

Source Name:	Alcoa, Inc. - Warrick Operations
Source Location:	Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629
County:	Warrick
SIC Code:	3334
Operation Permit No.:	T 173-6627-00007
Operation Permit Issuance Date:	Not Yet Issued
Significant Source Modification No.:	173-16034-00007
Permit Reviewer:	Ghassan Shalabi

The Office of Air Quality (OAQ) has reviewed a modification application from Alcoa, Inc. - Warrick Operations relating to the construction of the following emission units and pollution control devices:

(a) Three (3) flux gas injection systems identified as Pyrotek HD-2000 installed on melters 8M1, 8M2, and 8M3 in the 8EMC casting complex exhausting to Stacks 134.80, 134.84, and 134.89 respectively with a capacity of 47.00 tons of molten aluminum, plant return scrap, purchased scrap, and alloy elements per hour each.

(b) Two (2) degassing units, identified as Alcan Compact Degassing (ACD) units installed in conjunction with #1 east holding furnace and #1 west holding furnace in the 1HDC complex. These units will be replacing one (1) A622 in-line degassing unit in the 1HDC and one (1) A622 in-line degassing unit in the 5HDC and will be exhausting to Stacks 134.63 and 134.66 respectively with a capacity of 10.0 tons of molten aluminum per hour each.

IDEM, OAQ, decided to incorporate changes from the 40 CFR Part 63 Subpart RRR final rule compliance amendments promulgated September 24, 2002 in this Permit.

History

On September 5, 2002, Alcoa, Inc. - Warrick Operations submitted a modification application for the installation of a Pyrotec HD-2000 flux gas injection system on each of the three melt furnaces in the 8EMC casting Complex. Additional information was received on September 24, 2002, October 03, 2002, and October 21, 2002. On November 21, 2002 Alcoa, Inc. - Warrick Operations submitted an amendment to the original application. The application amendment requested replacing the A622 in-line degas units in the 1HDC with Alcan Compact Degassing (ACD) unit to process molten aluminum from the east holding furnace. This amendment also requested decommissioning the A622 in-line degasser in the 5HDC and replacing it with Alcan Compact Degassing (ACD) unit in the 1HDC complex to process molten aluminum from the west

holding furnace.

This existing source has submitted their Part 70 (T 173-6627-00007) application on September 19, 1996.

Existing Approvals

The source applied for a Part 70 Operating Permit on September 19, 1996. The source has been operating under previous approvals including, but not limited to, the following:

(a) Administrative Amendment, issued on December 27, 2002

(b) Significant Source Modification, issued on August 23, 2002

(c) Minor Source Modification 173-15352-00007, issued on April 23, 2002;

(d) Minor Source Modification 173-14944-00007, issued on December 5, 2001;

(e) Significant Source Modification 173-14145-00007, issued on July 7, 2001;

(f) Minor Source Modification 173-12886-00007, issued on February 1, 2001;

Enforcement Issue

(a) IDEM is aware that at least one of the three (3) flux gas injection systems has been constructed and operated prior to receipt of the proper permit.

(b) IDEM is reviewing this matter and will take appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (^{0}F)
134.80	8EMC melter 8M1	129	5.2	32,000 - 68,500	220 - 560
134.84	8EMC melter 8M2	129	5.2	32,000 - 68,500	220 - 560
134.89	8EMC melter 8M3	129	5.2	32,000 - 68,500	220 - 560
134.63	1HDC east holding furnace and in line degass unit	102	4	23,188	307
134.66	1HDC west holding furnace and in line degass unit	102	4	23,188	307

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on September 05, 2002. Additional information was received on September 24, 2002, October 03, 2002, and October 21, 2002. An

application amendment was received on November 21, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (21 Pages).

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	58.16
PM-10	71.52
SO_2	0.45
VOC	2.01
CO	12
NO_x	70.44

HAP's	Potential To Emit (tons/year)
HF	11.4
HCL	9.74
Methylene Chloride	2.54
Other	1.92
TOTAL	25.6

Justification for Modification

The Part 70 Operating permit (Not yet issued) is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5 (f)(4) and 326 IAC 2-7-10.5 (f)(6). The potential to emit is greater than or equal to twenty-five (25) tons per year for PM, PM-10 and NOx. Also, the potential to emit is greater than 10 tons per year for a single HAP and greater than 25 tons per year for the total HAPs.

County Attainment Status

The source is located in Warrick County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating

to the ozone standards. Warrick County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Warrick County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	Greater than 100
PM-10	Greater than 100
SO_2	Greater than 100
VOC	Greater than 100
CO	Greater than 100
NOx	Greater than 100

(g) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories.

(h) These emissions are based upon Alcoa Inc., Warrick Operations 2000 Annual Source Emission Statement.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)									
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	Lead	Beryllium	Fluorides	HAPs
PTE for the three melters	49.57	53.54	0.45	2.01	12.00	70.44	0.0099	0.000702	11.43	22.10
Past Actual for melters	37.89	40.91	0.31	1.31	7.84	46.07	0.0058	0.00041	8.745	
PTE - Past Actual	11.68	12.63	0.14	0.70	4.16	24.37	0.00411	0.000292	2.69	
Increased Utilization	8.79	21.51	0.07	0.29	1.71	10.06				
PTE for degassers	8.6	13.41								3.51

Past Actuals for degassers	27.25	42.51								
PTE - Past Actual for degassers	-18.65	-29.10								
Increased Utilization	-1.18	-1.72	4.52E-03	1.24	1.63	1.83				
Net Emissions from Project	0.64	3.32	0.20	2.23	7.50	36.26	0.00411	0.000292	2.69	25.61
PS Significant levels	25	15	40	40	100	40	0.6	4.00E–04	3.00	

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

(b) Melters 8M1, 8M2, 8M3, and the two ACD units are subject to the National Emission Standards for Hazardous Air Pollutants, for Secondary Aluminum Production, 40 CFR 63.1500 (Subpart RRR), 326 IAC 14, and 326 IAC 20-1-1. Pursuant to 40 CFR Part 63 Subpart RRR, and 326 IAC 20-1-1, Melters 8M1, 8M2, and 8M3 are subject to the following conditions:

Emission Limits

(a) On and after the applicable compliance date established by 40 CFR 63.1501(a), the Permittee shall comply with the following emission limitations:

(1) The PM emission limit (L_{cPM}) for a Group 1 furnaces (Melters 8M1, 8M2, and 8M3) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

(2) The HCl emission limit (L_{cHCl}) for a Group 1 furnaces (Melters 8M1, 8M2, and 8M3) at a secondary aluminum production facility shall be 0.40 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

(3) The D/F emission limit (L_{cDF}) for a Group 1 furnaces (Melters 8M1, 8M2, and 8M3) at a secondary aluminum production facility shall be 2.1×10^{-4} gr of D/F TEQ per ton of feed/charge or per ton of aluminum produced. Where TEQ is the toxicity equivalents for dioxins and furans as defined in “Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update”. [40 CFR 63.1505(i)][40 CFR 63.1505(k)]

(b) On and after the applicable compliance date established by 40 CFR 63.1501(a), the Permittee shall comply with the following emission limitations:

(1) The PM emission limit (L_{cPM}) for the in-line degassers (ACD units in conjunction with #1 east holding furnace and #1 west holding furnace) at a secondary aluminum production facility shall be 0.01 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(j)][40 CFR 63.1505(k)]

(2) The HCl emission limit (L_{cHCl}) for the in-line degassers (ACD units in conjunction with #1 east holding furnace and #1 west holding furnace) at a secondary aluminum production facility shall be 0.04 pounds per ton of feed/charge or per ton of aluminum produced. [40 CFR 63.1505(j)][40 CFR 63.1505(k)]

Operating Requirements

(a) The Permittee shall provide and maintain easily visible labels at each affected unit that identifies the applicable emission limit and means of compliance [63.1506(b)]. The labels shall include:

(1) The type of affected emission unit (i.e., Group 1 Furnace or in-line ACD); and

(2) The applicable operational standard and control method, including the type of charge to be used in the furnace, flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the Operation, Maintenance, and Monitoring Plan.

(b) The Permittee shall install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test. The Permittee shall operate each measurement system or other weight determination procedure in accordance with the Operation, Maintenance, and Monitoring Plan. [40 CFR 63.1506(d)]

(c) The permittee shall maintain the total reactive flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test for melters 8M1, 8M2, and 8M3 modified by the addition of Pyrotek HD-2000 flux gas injection systems and the in-line ACD units. [40 CFR 63.1506(k)(4)]

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(d) When a process parameter deviates from the value or range established during the performance test and incorporated in the Operation, Maintenance, and Monitoring Plan, the Permittee shall initiate corrective action. The corrective action shall restore operation of the affected emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken shall include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of the deviation [63.1506(p)].

Monitoring Requirements

(a) On or after the date of the initial performance test is required to be completed, the Permittee shall monitor all emission units and control equipment according to the following requirements [63.1510(a)]:

The Permittee shall calculate and record the 3-day, 24- hour rolling average emissions of PM, HCl, and D/F for each secondary aluminum processing unit on a daily basis. To calculate the 3-day, 24-hour rolling average, the Permittee shall [63.1510(t)]:

(1) Calculate and record the total weight of material charged to each emission unit in the secondary aluminum processing unit for each 24-hour day of operation using the feed/charge weight data collected as required under Subpart RRR. If the Permittee chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations shall be conducted on the aluminum production weight basis.

(2) Multiply the total feed/charge weight to the emission unit, or the weight to the emission unit, or the weight of aluminum produced by the emission unit for the 24-hour period by the emission rate (in lb/ton of feed/charge) for that emission unit (as determined during the emission test) to provide emissions for each emission unit for the 24-hour period, in pounds.

(3) Divide the total emissions for each secondary aluminum processing unit for the 24-hour period by the total material charged to the secondary aluminum processing unit, or the total weight of aluminum produced by the secondary aluminum processing unit over the 24-hour period to provide the daily emission rate for the secondary emission unit.

(4) Compute the 24-hour daily emission rate using the equation:
Where,

$$E_{day} = \frac{\sum_{i=1}^{n} \left(T_i x E R_i\right)}{\sum_{i=1}^{n} T_i}$$

E_{day} = The daily respective PM, HCl, or D/F emission rate for the secondary aluminum processing unit for the 24-hour period;
T_i = The total amount of feed, or aluminum produced, for emission unit i for the 24-hour period in tons;
ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton or ug/Mg or feed/charge); and
n = The number of emission units in the secondary aluminum processing unit.

(5) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3.

(b) The Permittee shall prepare a written Operation, Maintenance, and Monitoring Plan and shall submit the plan to the applicable permitting authority for review and approval. Any subsequent changes to the plan shall be submitted to the applicable permitting authority for review and approval. Pending approval of the initial or amended plan, the Permittee shall comply with the conditions of the submitted plan. The plan shall include the following information [63.1510(b)]:

(1) The process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each affected unit and control device.

(2) A monitoring schedule for each affected unit.

(3) Procedures for the proper operation and maintenance of each affected unit and control device used to meet the applicable emission limit in 40 CFR 63.1505.

(4) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:

(A) Calibration and certification of accuracy of each monitoring device, at least once every six (6) months, according to the manufacturer's instructions; and

(B) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in 40 CFR 63, Subpart A.

(5) Procedures for monitoring process and control parameters, including procedures for annual inspections of afterburners, and if applicable, the procedures to be used for determining feed (or throughput) weight if a measurement device is not used.

(6) Corrective actions to be taken when process operating parameters or add-on control device parameters deviate from the value or range established in (A) above, including:

(A) Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and

(B) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time and date corrective action was completed.

(7) A maintenance schedule for each affected unit and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

(c) The Permittee shall inspect the labels for each affected unit at least once per calendar month to confirm that posted labels as required by the operational standard in 40 CFR 63.1506(b) are intact and legible [63.1510(c)].

(d) The Permittee shall install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, each furnace over the same operating cycle or time period used in the performance test. As an alternative to a measurement device, the Permittee may use a procedure acceptable to IDEM, OAQ to determine the total weight of feed or aluminum production for each affected unit. The accuracy of the weight measurement device or procedure shall be within one (1) percent of the weight being measured. The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months [63.1510(e)].

(e) Pursuant to 63.1510(j), the Permittee shall:

(1) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of flux injected into each affected unit. The monitoring system must record the weight for each fifteen (15) minute period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test. The accuracy of the weight measurement shall be within one (1) percent of the weight of the reactive component of the flux being measured. The Permittee shall verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months.

(2) Calculate and record the flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test.

(3) Record, for each fifteen (15) minute time period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of reactive flux.

(4) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test.

The completion of the initial performance tests for the secondary aluminum processing units shall be considered to be the date of approval of the Operation, Maintenance and Monitoring Plan by IDEM, OAQ [63.1506(a)(2)].

Performance Tests

(a) Prior to conducting the performance test required by 40 CFR 63, Subpart RRR, the Permittee shall prepare and submit a site-specific test plan in compliance with 40 CFR 63.7(c). Following approval of the site-specific test plan, the Permittee shall demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected unit and report the results in the notification of compliance report. The Permittee shall conduct performance tests in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. The Permittee shall use Method 23 in Appendix A to 40 CFR 60 or an alternative method approved by the Administrator to measure the concentration of D/F.

The Permittee shall notify the Administrator of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test shall be provided at least 30 days before the observations are scheduled to take place [63.1511(a)].

(b) The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limits. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [40 CFR 63.1511(g)].

Notifications

Pursuant to 40 CFR 63.1515(b), the Permittee shall submit a notification of compliance status reports no more than 60 days after March 24, 2003 for melters 8M1, 8M2, 8M3, and the ACD in-line degassers. The notification must be signed by the responsible official who must certify its accuracy. The report shall include:

(1) All information required in 40 CFR 63.9(h). The Permittee shall provide a complete performance test report for each affected unit, including data, associated measurements, and calculations.

(2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system.

(3) Unit labeling as described in 40 CFR 63.1506(b), including process type or each affected unit classification and operating requirements.

(4) The compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used to establish the value (e.g., alkaline agent injection rate, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.

(5) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for the capture/collection system required in 40 CFR 63.1506(c).

(6) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems required in 40 CFR 63.1510(f).

(7) Approved Operation, Maintenance, and Monitoring Plan.

(8) Startup, shutdown, and malfunction plan.

Reports

(a) The Permittee shall develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the emission limit. The Permittee shall keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during startup, shutdown, or malfunction is not consistent with the procedures in the startup, shutdown, and malfunction plan. The plan shall include [63.1516(a)].

(1) The procedures to determine and record the cause of a malfunction and the time the malfunction began and ended; and

(2) Corrective actions to be taken in the event of a malfunction of a process or control device , including the actions taken to correct the malfunction or minimize emissions.

(b) The Permittee shall submit a semi-annual report within 60 days after the end of each six (6) month period detailing all deviations from the Operation, Maintenance, and Monitoring Plan. When no deviations have occurred, the Permittee shall submit a report stating that no excess emissions occurred during the reporting period. A report shall be submitted if any following conditions occur [63.1516(b)]:

(1) An excursion of a compliant process or operating parameter value or range.

(2) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan.

(3) A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.

The Permittee shall submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.

Records

The Permittee shall maintain files of all information, including reports and notifications, required by 40 CFR 63.10 and 40 CFR 63.1517. The Permittee shall retain each record for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent two (2) years of records shall be retained at the source. The remaining three (3) years of records may be retained off-site. The Permittee may retain records on microfilm, computer disks, magnetic tape or microfiche.

In addition to the general records required by 40 CFR 60.10(b), the Permittee shall maintain:

(a) The number of total operating hours for the affected source or emission unit during each 6 month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.

(b) For each Group 1 furnace, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid, or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.

(c) Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.

(d) Records of any approved alternative monitoring or test procedure.

(e) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:

(1) Startup, shutdown, and malfunction plan;

(2) Operation, Maintenance, and Monitoring Plan; and

(3) Site-specific secondary aluminum processing unit emission plan.

(f) For each secondary aluminum processing unit, records of total charge weight, or if the Permittee chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.

The provisions of 40 CFR 63 subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 subpart RRR.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration)

The following conditions shall apply:

(a) The annual feed/charge rate of each of melters 8M1, 8M2, and 8M3 shall not exceed 280,082 tons per year.

(a) The natural gas usage of each of melters 8M1, 8M2, and 8M3 shall not exceed 515 MMCF per year.

(b) PM emissions from melters 8M1, 8M2, and 8M3 shall not exceed 0.118 lb per ton of charge each and the total PM emissions from all the three melters shall not exceed 49.57 tons per year.

(c) PM10 emissions from melters 8M1, 8M2, and 8M3 shall not exceed 0.127 lb per ton of charge each and the total PM10 emissions from all the three melters shall not exceed 53.54 tons per year.

(d) NOx emissions from melters 8M1, 8M2, and 8M3 shall not exceed 91.19 lb per MMCF of natural gas each and the total NOx emissions from all the three melters shall not exceed 70.44 tons per year.

(e) The annual feed/charge rate of the 8EMC east holding furnace and the 8 EMC west holding furnace shall be limited to 823,440 tons per year.

(f) The natural gas usage of the 8EMC east holding furnace and the 8 EMC west holding furnace shall not exceed 400 MMCF per year.

(g) The PM emissions from the 8EMC east holding furnace and the 8 EMC west holding furnace shall be limited to 0.083 lb/ton of charge and the total PM emissions from both holding furnaces shall be limited to 34.17 tons per year.

(h) The PM10 emissions from the 8EMC east holding furnace and the 8 EMC west holding furnace shall be limited to 0.121 lb/ton of charge and the total PM emissions from both holding furnaces shall be limited to 49.89 tons per year.

(i) The NOx emissions from the 8EMC east holding furnace and the 8 EMC west holding furnace shall be limited to 91.19 lb per MMCF of natural gas and the total NOx emissions from both holding furnaces shall be limited to 18.24 tons per year.

(j) The annual feed/charge rate of the 8EMC ACD and A622 units shall be limited to 411,720 tons per year each.

(k) The PM emissions from the 8EMC ACD unit shall be limited to 0.003 lb/ton of feed/charge and the total PM emissions shall be limited to 0.62 tons per year.

(l) The PM emissions from the 8EMC A622 unit shall be limited to 0.001 lb/ton of feed/charge and the total PM emissions shall be limited to 0.21 tons per year.

(m) The PM10 emissions from the 8EMC ACD and A622 units shall be limited to 0.00312 lb/ton of feed/charge and the total PM emissions shall be limited to 0.64 tons per year.

(n) The feed/charge rate of each of the #1 complex ACD units shall not exceed 86,000 tons per year.

(o) PM emissions from the #1 complex ACD units shall not exceed 0.10 lb per ton of molten metal and the total PM emissions the two (2) ACD units shall not exceed 8.60 tons per year.

(p) PM10 emissions from the #1 complex ACD units shall not exceed 0.156 lb per ton of charge each and the total PM10 emissions from all the three melters shall not exceed 13.41 tons per year.

(q) The total feed/charge of the #1 complex east and the #1 complex west holding furnaces shall not exceed 172,000 tons per year.

(r) PM emissions from the #1 complex east and west holding furnaces shall not exceed 0.045 lb per ton of molten metal and the total PM emissions these furnaces shall not exceed 3.87 tons per year.

(s) PM10 emissions from the #1 complex east and west holding furnaces shall not exceed 0.066 lb per ton of charge and the total PM10 emissions from these furnaces shall not exceed 5.65 tons per year.

(t) NOx emissions from the #1 complex east and west holding furnaces shall not exceed 0.037 lb per ton of charge and the total NOx emissions from these furnaces shall not exceed 3.182 tons per year.

Compliance with these limits render the requirements of 326 IAC 2-2 and 40 CFR 52.21 (Prevention of Significant Deterioration) not applicable.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

Melters 8M1, 8M2, and 8M3 have the potential to emit levels of hazardous air pollutants (HAPs) greater than those that constitute major source applicability according to Section 112 of the 1990 Clean Air Act. However, furnace #4 is subject to the provisions of 40 CFR 63 Subpart RRR (National Emission Standards for Hazardous Air Pollutants, for Secondary Aluminum Production). Therefore, compliance with 40 CFR Part 63 Subpart RRR satisfies the requirements of 326 IAC 2-4.1.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-3 (Process Operations)

(a) The particulate matter (PM) from melters 8M1, 8M2, and 8M3 shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour
and
P = process weight rate in tons per hour

(b) The particulate matter (PM) from the ACD units shall be limited by the following:

Interpolation and extrapolation of the data for the process weight rate in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour
and
P = process weight rate in tons per hour

326 IAC 7-1.1-2 (Sulfur Dioxide Emission Limitations)

The requirements of 326 IAC 7-1.1-2 are not applicable to melters 8M1, 8M2, 8M3, and the two ACD units because they have a potential to emit sulfur dioxide (SO_2) less than twenty-five (25) tons per year.

326 IAC 8-1-6 (Volatile Organic Compounds)

The requirements of 326 IAC 8-1-6 are not applicable to melters 8M1, 8M2, 8M3, and the two ACD units because they have a potential to emit volatile organic compounds (VOC) less than twenty-five (25) tons per year.

Testing Requirements

(a) In order to demonstrate compliance with 40 CFR Part 63 Subpart RRR, 40 CFR 52.21, and 326 IAC 2-2, the permittee shall, within 180 days after startup, perform PM, HCl, and D/F testing on melters 8M1, 8M2, and 8M3, and PM and HCL testing on the ACD units, using methods as approved by the Commissioner, in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. The permittee shall conduct the tests while the affected emission units are operating at the highest production levels with charge materials representative of the range of materials processed by the units and at the highest reactive fluxing rates. Testing shall be conducted in accordance with Section C- Performance Testing. These tests shall be repeated every five (5) years.

(b) The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511(g) are met [63.1511(g)].

(c) To verify that the NOx emissions do not exceed PSD significant levels pursuant to 326 IAC 2-2 and 40 CFR 52.21, the permittee shall, within 180 days after startup, perform NOx testing on a representative 8EMC melter (8M1 or 8M3), 8EMC holder (east holding furnace or west holding furnace), and #1 complex holder (east holding furnace or west holding furnace.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 173-16034-00007.

2000 Actual Emissions (HD-2000 flux gas injection)

PM

For period from Jan. 1 to July 31, 200			
Emission Factor	0.23	lb/ton	
Charge Rate	288,726.77	ton/yr	1998 bi-annual Stack Test
Total Emissions	33.20	tons/yr	
For period from Aug. 1 to Dec. 31			
Emission Factor	0.123	lb/ton	1998 bi-annual Stack Test
Charge Rate	204,890.01	ton/yr	
Total Emissions	12.60	tons/yr	
Total 2000 PM Emissions	45.80		

PM10

PM10 emissions =	1.08	* PM emissions	
Annual Emissions	49.47	ton/yr	

SO2

Emission Factor	0.6	lb/MMCF	AP -42
Annual NG usage	969.3	MMCF/yr	
Annual Emissiosn	0.29	ton/yr	

NOx

Emission Factor	91.19	lb/MMCF	In House Stack Test
Annual NG usage	969.3	MMCF/yr	
Annual Emissiosn	44.20	ton/yr	

CO

Emission Factor	15.52	lb/MMCF	In House Stack Test
Annual NG usage	969.3	MMCF/yr	
Annual Emissiosn	7.52	ton/yr	

VOC

Emission Factor	2.59	lb/MMCF	In House Stack Test
Annual NG usage	969.3	MMCF/yr	
Annual Emissiosn	1.26	ton/yr	

Lead

Emission Factor	2.36E-05	lb/ton	Stack Test
Annual Charge Rate	493,618.78	ton/yr	
Annual emissions	5.82E-03	tons/yr	

Beryllium

Emission Factor	1.67E-06	lb/ton	Stack Test
Annual Charge Rate	493,618.78	ton/yr	
Annual emissions	4.12E-04	tons/yr	

Fluorides from molten metal provided by the potrooms

Emission Factor	0.063	lb/ton	
Annual Charge Rate	267,883.31	ton/yr	
Annual emissions	8.44E+00	tons/yr	

2001 Actual Emissions (HD-2000 flux gas injection)

PM			
Emission Factor	0.123	lb/ton	Semi annual Stack test EF
Hourly Charge Rate	32.87	tons/hr	
Hourly emissions	4.04	lb/hr	
Annual Charge Rate	162,358	ton/yr	
Annual emissions	9.99	tons/yr	per unit
PM10			
PM10 emissions =	1.08	* PM emissions	
Hourly emissions	4.37	lb/hr	
Annual Emissions	10.78	ton/yr	per unit
SO2			
Emission Factor	0.6	lb/MMCF	
Hourly NG usage	80,000	CF/hr	
Hourly Emissions	0.05	lb/hr	
Annual NG usage	350.48	MMCF/yr	
Annual Emissiosn	0.11	ton/yr	per unit
NOx			
Emission Factor	91.19	lb/MMCF	In-house test
Hourly NG usage	80,000	CF/hr	
Hourly Emissions	7.30	lb/hr	
Annual NG usage	350.48	MMCF/yr	
Annual Emissiosn	15.98	ton/yr	
CO			
Emission Factor	15.52	lb/MMCF	In-house test
Hourly NG usage	80,000	CF/hr	
Hourly Emissions	1.24	lb/hr	
Annual NG usage	350.48	MMCF/yr	
Annual Emissiosn	2.72	ton/yr	
VOC			
Emission Factor	2.59	lb/MMCF	
Hourly NG usage	80,000	CF/hr	
Hourly Emissions	0.21	lb/hr	

Annual NG usage	350.48	MMCF/yr	
Annual Emissiosn	0.45	ton/yr	

Lead

Emission Factor	2.36E-05	lb/ton	Most recent test
Hourly Charge Rate	32.87	tons/hr	
Hourly emissions	0.000775732	lb/hr	
Annual Charge Rate	162,358	ton/yr	
Annual emissions	1.92E-03	tons/yr	

Beryllium

Emission Factor	1.67E-06	lb/ton	Most recent test
Hourly Charge Rate	32.87	tons/hr	
Hourly emissions	5.48929E-05	lb/hr	
Annual Charge Rate	162,358	ton/yr	
Annual emissions	1.36E-04	tons/yr	

Fluorides from molten metal provided by the potrooms

Emission Factor	0.063	lb/ton	Most recent test
Hourly Charge Rate	32.87	tons/hr	
Hourly emissions	2.07	lb/hr	
Annual Charge Rate	95,763.26	ton/yr	
Annual emissions	3.01654269	tons/yr	

2000 - 2001 Average Actuals

Pollutant	2000 Emissions	2001 Emissions	Average Emissions
PM	45.8	29.97	37.89
PM10	49.47	32.34	40.905
SO2	0.29	0.33	0.31
NOx	44.2	47.94	46.07
CO	7.52	8.16	7.84
VOC	1.26	1.35	1.305
Lead	5.82E-03	5.76E-03	0.00579
Beryllium	4.12E-04	4.08E-04	0.00041
Fluorides	8.44	9.05E+00	8.7448141